

REMARKS/ARGUMENTS

Reconsideration and allowance are respectfully requested. The Examiner is requested to enter this amendment as it is directly responsive to the present objection and will not require further search.

I. Status of the Claims

Claims 1-3 and 7 are pending in this application. Claims 1-3 and 7 have been rejected. Claim 1 has been amended. Claim 8 is new. Support for amended claim 1 and new claim 8 can be found throughout the specification. For example, support for the phrase in claim 1 which recites: "said auxiliary amino acid sequences (Y) having a (Gly Ala Gly Ala Gly Ser)_b sequence (wherein b is integers of 2 to 33)" is found in the specification, line 16, page 8 to line 8, page 9 of the original specification. Support for the phrase: "...serving to improve thermal resistance" is found in the specification, lines 9 to 11, page 8 of the original specification. Support for the phrase: "thereby improving efficiency for producing a virus" is found in the specification, lines 9 to 11, page 8 of the original specification. Support for new claim 8 is found in the specifications in the examples and the specification on line 27, page 11 to line 9, page 12 in the original specification to limit the claim scope to "ProNectin F", "ProNectin F2", or "ProNectin F3" used in the examples. No new matter has been added by virtue of these amendments and entry is respectfully requested.

Any amendments or cancelation of subject matter is not to be construed as surrender of any subject matter. Applicants hereby reserve the right to pursue and amend or canceled subject matter in one or more continuation or divisional applications.

II. Rejection under 35 U.S.C. §103(a)

Claims 1-3 and 7 were rejected under 35 U.S.C. §103(a) as unpatentable over Kistner *et al.*, Developments in Biological Standardization (1999); Wang *et al.*, Bioprocess Engineering (1999); and Kobatake *et al.*, Biotechnology Techniques (1999).

The rejection is respectfully traversed, and reconsideration is requested.

The Examiner has alleged on page 3, second paragraph of the Office Action:

Kistner *et al.* teach producing influenza viruses in Vero cells attached to microcarriers (Cytodex-3) which contain denatured collagen (a natural cell binding protein) [as evidenced by Wang and Ouyang, page 207] with serum-free media. Kistner *et al.* use a porcine trypsin enzyme during the culture process of the virus. Even though collagen is a protein of animal origin, the denatured form of the collagen employed by Kistner *et al.* is structurally distinct from that of a naturally occurring collagen molecule and therefore not of animal origin. However, Kistner *et al.* do not teach the involvement of an auxiliary amino acid sequence as part of the polypeptide (P) which as defined in the specification, aids in the thermal stability of P; or the use of a cell dispersing agent that is free of animal origin components. *See pages 103, 106 and table 5.*

The Examiner also alleges on page 3, last paragraph that Aerts *et al.*, "teach the importance of culturing viruses (including influenza virus) in media that lacks components from animals (i.e., sera and proteases)." On page 4 of the Office Action, the Examiner alleges that Kopbatake *et al.*, teach specific amino acid residues for adhering cells in tissue culture protocols.

The Examiner further alleges, page 5 last paragraph:

In addition, applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., improved viral production) are not recited in the rejected claims(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Applicants respectfully disagree with the above allegations. However, in order to compact and expedite prosecution, Applicants have amended claim 1. The amendment is not to be construed as acquiescing to the Examiner's position and are made without prejudice. Applicants reserve the right to pursue any amended or canceled subject matter in one or more continuation or divisional applications. Claim 1 has now been amended to incorporate the distinct feature of the

present invention that the efficiency for producing a virus is improved by using a polypeptide (P) with improved thermal resistance (see, for example, Comparative Examples 1 to 6). None of the above reference standing alone or in combination teach or suggest claim 1 as amended. Furthermore, none of the references teach, suggest, or motivate one of skill in the art a polypeptide sequence having a (Gly Ala Gly Ala Gly Ser) sequence. In addition, one of ordinary skill in the art would not be able to arrive at such a sequence without Applicants' teachings and as such, none of the references in combination would render the instant invention as obvious. Applicants submit that according to the method of producing a virus, as taught by the instant specification, using a polypeptide having a (Gly Ala Gly Ala Gly Ser) sequence, higher productivity of virus (HA) can be obtained as compared to the comparative examples using a denatured collagen (Cytodex) that does not have such sequence.

In view thereof, Applicants respectfully request reconsideration and withdrawal of the instant rejection.

CONCLUSION

In view of the foregoing it is believed that remaining claims 1-3 and 7-8 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

This response is being filed within the shortened statutory period and no fees or extensions of time are due. Although, Applicants believe that no extensions of time are required with submission of this paper, Applicants request that this submission also be considered as a petition for any extensions of time if deemed necessary. The Commissioner is hereby authorized to charge any

unpaid fees deemed required in connection with this submission, or to credit any overpayment, to
Deposit Account No. 04-0100.

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Respectfully submitted,

By /Nicholas A. Zachariades/
Nicholas A. Zachariades
Registration No.: 56,712
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant(s)